



ONE DOLLAR PER YEAR.

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GEO. W. YORK, ASSISTANT EDITOR.

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Editorial Buzzings.

What makes you think the world is round?
 Give me a reason fair.
 Because so very few are found
 Who act upon the square.

Mr. T. W. Cowan, editor of the *British Bee Journal*, is traveling in Northern Africa, looking up the bees of that locality. He intends to return next month.

Mesquite Honey.—Mr. John L. Gregg, of Tempe, Arizona, says: "When I work for mesquite honey alone, I extract on Mondays and again on Thursdays—third and fourth days, and my bees averaged all around 485 pounds to the colony, Spring count. Has any one ever beaten that record? I think not. Mesquite honey, to my taste, is far ahead of any other variety, and it is in the true sense of the word white honey, as it is as clear as water."

The Late Season we are having may not be wholly an unmitigated evil, as warm and moist weather is just such as is required for the secretion of the greatest amount of nectar for the bees. While it may be a very late Spring, it is quite probable that the honey season will extend further into the Fall, and thus balance the backwardness of the present spring-time. Among those depending upon farm crops, there is no little uneasiness in this region, as very little corn has been planted, though very fair crops of corn may be secured by planting early-maturing varieties as late as June 10, should that be necessary, if the season thereafter be favorable. Late-planted corn will mature in a less number of days than corn of the same variety planted earlier. One advantage of the lateness of the season for bee-keepers, is the fact that they will have more time to provide all necessary things for securing the harvest of honey when it does come. But there may be danger of forming the bad habit of delaying or "putting off" until "a more convenient season," which is very discreditable, indeed. It pays to be prepared for any emergency in life—and especially in bee-keeping. In some places clover has made a very encouraging start, and it is also quite plentiful. When the season once opens, it is earnestly hoped that it will remain open. ●

Sweetened essence of peppermint is used to advantage while introducing queens. This scented water is put into an atomizer, and the bees and combs thoroughly sprayed with it, then the queen is placed on one of these scented combs, a little of the spray thrown on her, and the hive closed. This plan is said to work more successfully than many of the old plans, and admits of immediate introduction of the queen.

Queenless Colonies and those which are weak should be united. Feed the bees if it becomes necessary.

Spraying of Fruit-Trees.—

Mr. F. A. Gemmill, President of the Ontario Bee-Keepers' Association, sends us Bulletin No. 73, on this subject, published by the Ontario Agricultural College Experiment Station, and also the discussion while the Act was before the Legislative Assembly, from which we make the following liberal extracts :

The Legislative Assembly of Ontario, at the late session, passed the following Act, in reference to the spraying of fruit-trees and the protection of bees. Following it will be found a brief summary of the evidence taken before a Special Committee of the House in connection with the consideration of this Bill :

AN ACT FOR FURTHER PROTECTION OF BEES.
(Assented to April 8, 1892.)

1. No person in spraying or sprinkling fruit-trees during the period within which such trees are in full bloom, shall use, or cause to be used, any mixture containing Paris green, or any other poisonous substance injurious to bees.

2. Any person contravening the provisions of this Act, shall, on summary conviction thereof, before a Justice of the Peace, be subject to a penalty of not less than \$1.00, or more than \$5.00, with or without costs of prosecution, and in case of a fine, or a fine and costs being awarded, and of the same not being upon conviction forthwith paid, the Justice may commit the offender to the common gaol, there to be imprisoned for any term not exceeding 30 days, unless the fine and costs are sooner paid.

3. This Act shall not come into force until the first day of January, 1893.

EVIDENCE AS TO SPRAYING FRUIT-TREES.

Mr. Allen Pringle, ex-President Bee-Keepers' Association, Selby, gave evidence as to bees being killed by Paris green sprayed upon fruit-trees, referring to various accounts taken from bee-papers. He cited Prof. Cook, of Michigan, as authority. He had no experience himself as to effect of poisonous spraying upon his bees.

Mr. F. A. Gemmill, President Bee-Keepers' Association, Stratford: Bees will feed upon sweetened matter that contains poison. Spraying during bloom is only throwing away time, labor and money. When bloom has fallen is the proper time.

Mr. Wm. McEvoy, Bee-Inspector, Woodburn: He had heard many complaints that bees are being poisoned. Had seen them dying and dead; thought the honey also might be injured by poison being carried to it by the bees.

Mr. Gemmill did not think the honey would be affected; as when spraying is

done, the honey is being gathered for brood.

Mr. Gilmer said only one fruit-grower in his neighborhood sprayed; there was no loss, however, as he did not spray during bloom.

Mr. A. W. Peart, fruit-grower, Burlington: Had been for sometime in the habit of spraying apples, plums and cherries immediately after fall of blossoms. Did so because the blossoms are much more tender than the leaves. The bees play a very important part in cross-fertilization, and therefore should not be destroyed. Had had success in spraying, trees sprayed giving more bountiful harvest than those not sprayed. Thought this Bill was in accordance with the researches on these lines for the last ten years. Fruit-growers in his district delay spraying until after the blossoms fall, and are favorable to this Bill.

Mr. P. C. Dempsey, fruit-grower, Trenton: Had sprayed for over 30 years; with Paris green for only five or six. Sprayed only after blossoms fall. Since he had sprayed he would not find in 50 barrels of apples one barrel of bad ones, whereas before spraying was introduced, it would have been difficult to get that number of really good ones. As to injury to bees, he keeps 150 colonies of bees right in his orchard, and has never seen any of them suffer on account of spraying. Never sprayed during bloom. He sometimes sprays cherries and plums before the petals drop. He believed a Bill prohibiting spraying while in full bloom would be a benefit.

Mr. G. E. Fisher, fruit-grower, Burlington: His experience corresponded to Mr. Peart's. We are very generally dependent upon insects for the fertilization of our orchards. To destroy them to any extent would be very injurious to fruit-growers. He thought this Bill is just what fruit-growers require. If a man does not know enough not to spray while his trees are in full bloom, there should be an Act to prevent him from doing so. He had had no experience as to bees being injured by Paris green. A gentleman in Burlington told him that one of his neighbors used Paris green on his trees while in full bloom, and while it was going on he noticed that many of the bees died.

Mr. E. Morden, fruit-grower, Niagara Falls, had never yet heard a speaker who advocated spraying in full bloom. The codling moth and curculio do not deposit eggs on the blossom, but on the calyx of the embryo fruit. The curculios do not appear until about a week after the blossoms fall; then they are very

numerous for about ten days, after which they become comparatively rare. It is during these ten days that we ought to spray.

Mr. Kew, fruit-grower, of Beamsville, thought sufficient evidence had been given to show that the bees would be injured by the use of poisonous substances at an improper time.

Prof. Jas. Fletcher, Dominion Entomologist, Ottawa, stated that the pistil of the blossom is very sensitive, and a very weak solution of Paris green would destroy it, and prevent the formation of fruit. Bees are much more easily killed than other insects. There is no accurately recorded experiment as to whether or not bees have been killed by spraying. An experiment has been arranged. He did not believe the honey is at all affected. The poison taken by the bee is in the nectar that comes from the flowers, and before the bee can deposit it, the bee is dead, so that the honey in question is never deposited. Even if the bee did not die before depositing it, this honey is used not for surplus, but for feeding the young.

The following excellent remarks are from *Insect Life* for April, 1892, and should be read by all those interested in fruit or bees: "At last fruit-growers and bee-keepers are getting into right relations with each other. The numerous discussions which have taken place regarding the value of bees as fertilizers of fruit blossoms, and of those blossoms of plants grown for their seeds, and regarding the alleged damage to fruit by bees, have led to close observation and careful experimentation, the results of which show that the interests of these two classes of producers conflict, but in trifling respects—that, in fact, bee-keepers and fruit-growers are of great help to each other, and even indispensable if each is to obtain the best results in his work." The article in full was published on page 634 of last week's BEE JOURNAL.

Queen Bees may now be sent safely by mail, not only in America, but also to Europe, and even Australia. It is over 30 years ago since queens were first sent in the mails.

Electricity as a means of imbedding wires into comb-foundation is not only practical, but is also an economical method of doing it. In the last issue of *Gleanings* Mr. Root remarks as follows about his experiments in that line:

Some two months ago a correspondent of the AMERICAN BEE JOURNAL stated that he had succeeded in imbedding wires into foundation by means of electricity from a battery. This set us to thinking and experimenting, although we had entertained the same ideas some eight or ten years previously; but on account of the intersecting wires by the old way of wiring, the plan was not feasible.

But since we are beginning to use the horizontal plan, no wires intersecting, so that a current can be run from one end of the wire to the other, the matter has assumed a new aspect. Since that time we have been imbedding the wires to a lot of frames by electricity. The form of battery that we now employ is three cells of bichromate of potash, each of a gallon capacity, with the carbons in the large cell, and the zinc in the usual porous cup.

After the job is done, the wire lies nicely imbedded in the center of the wax; and, more than all, it is covered with a very thin transparent coating of wax. Sometimes bees are inclined to gnaw around the wires; but we imagine that, if the wires were covered with a film of wax, the bees would be less inclined to do so. However, experiment will decide this point.

At present it looks as if imbedding by means of electricity might not be so very expensive after all, and especially so if we consider the nicety of the work. We imbedded, this morning, the wires of about 50 frames into foundation by electricity, and the work is beautiful. By timing ourselves we found that we could put foundation on wires at the rate of three frames per minute; so that we think the imbedding could easily be done at the rate of 150 frames per hour.

One Day, at luncheon, Mamie was very greatly delighted with some honey which had been sent her by a friend who lives in the country and keeps bees. After eating awhile in silence she exclaimed: "Doesn't Mrs. Lepley teach her bees to make nice honey?"

Bees and Fruit.—In a recent issue of the *Indiana Farmer*, we found the following in "The Apiary" department, credited to a "sensible fruit-grower:"

I have purchased five acres more of land, which I hope to plant in fruit-trees, and have enlarged my apiary in order that I may take 10 colonies of bees to my newly-purchased ground when planted, for I am more fully convinced than ever that fruit-culture and bee-keeping ought to go hand in hand.

The nonsense about bees eating fruit, and so spoiling the profits of the pear and grape grower, has been believed about long enough. It can be safely asserted that honey-bees do not trouble fruit unless it has been attacked, and the skin punctured by wasps or birds, and their aid as a fertilizing agent is almost indispensable.

Here is a fruit-grower's testimony. On account of his experience with fruit and bees, he bought more land for fruit, and 10 colonies of bees to fertilize the blossoms and increase the product. *He knows by experience that it will pay to do so!*

It is then stated that it is time to discontinue the nonsensical talk about bees injuring pears and grapes—that "their aid as a fertilizing agent is almost indispensable"—that wasps or birds puncture the skins—that "it can be safely asserted that honey-bees do not trouble fruit, etc."

Then comes the most surprising part in a foot-note by the editor, which reads as follows:

We are not prepared to endorse the last statement. The bees conduct themselves very suspiciously. If they are innocent. We are inclined to believe that some of them learn to get into the grapes without the help of birds, while others may not have done so.

We looked in vain at the heading of the Department to find who is responsible for this "tid-bit" of comment—but, alas, there seems to be no one to father it! In times past several good apiarists have had control of it, but now some "nobody" is at the helm who assumes to throw doubt upon the experiments of

men of ability and honor who have given the most positive testimony in harmony with the assertions and experience of the fruit-grower quoted in the item commented upon!

We respectfully call the attention of the editor of the *Indiana Farmer* to the injustice done to the pursuit by the article in question, and refer him to the following letter from another prominent fruit-grower on the subject:

I see that there is considerable said from time to time about bees damaging grapes, as well as some other kinds of small fruit. I claim that it is all "bosh," unless the fruit is first injured in some way or another. I make this assertion from my own experience in growing grapes in the same yard with a number of colonies of bees, at the same time using the grapes as shade for the bee-hives. As my attention has been called to this matter at different times, I have given it much thought, and watched it most carefully.

In the last three years there has been only two instances where the bees have worked on grapes in the least.

In the first instance the damage was caused by the chickens picking and eating the lower branches, or clusters, that were hanging low down within their reach. The second instance was caused by a very severe hail-storm, which bruised or punctured the grapes enough to expose their seeds, enticing the bees to work on them. This lasted only for a few days, until the bruises became seared over. You will observe that in both instances the fruit was first injured before the bees would have anything to do with it, and I do not believe that bees will hurt grapes or other kind of fruit, unless such fruit is damaged by something else. Using them as I do for shade for bee-hives, large clusters of the delicious fruit hang all around the hives—yes, and even within a few inches of the entrance to the hive. This must certainly give a pretty good chance to test the matter. In conclusion I will say that I really believe that the most of this complaint is caused by prejudice.

Boscobel, Wis.

B. E. RICE.

A Man was recently convicted in New Hampshire for selling artificial honey, and sentenced to pay a fine of \$100.

A Very Remarkable Insect.

Our cut represents a large specimen of the "walking leaf" insect of India. The color of the insect is like a fresh green leaf,



which favors the deception so that it is almost impossible to see it among the jungle foliage unless it moves. It has six legs, each resembling two small leaves, and the veins throughout appear of a paler tint, in exact imitation of a lime leaf. The insect is a rare and conspicuous species of the Phasmoda family, and its remarkable formation is sure to

interest the general reader as well as the naturalist.

Hicks, the Missouri storm prophet, in *Word and Works*, says: "Tell our passengers in plain English just what you know on the subject. The very minute we begin to write what we do not know, the world itself would not contain the books we might write." This will apply to bee-literature as well as other matters. So says an exchange.

Mr. C. A. Hatch, President of the Wisconsin Bee-Keepers' Association, writes thus to the Secretary, Dr. J. W. Vance, concerning the honey exhibit of that State at the World's Fair:

I think 300 feet ample room. Ten by 30 feet will hold quite a lot of honey and beeswax. According to present indications this is all that will be allowed State exhibits. Hives, fixtures and bees will be shown by the department as a whole, which, I think, is a wise arrangement, as there is so little difference in bees that individual exhibits would be out of the place.

Whether we are to make our show as a society in connection with Wisconsin's State show, or as a part of the regular bee and honey department show has not yet been determined. All arrangements for the separate department for bees and

honey are, as yet, only provisional. We hope that all will soon be arranged on a satisfactory and permanent basis. Dr. Mason is pushing things along as fast as he can, I am sure, and probably before the honey harvest begins, things will be brought into proper shape.

Yes; everything is done that can be to hasten arrangements—but large bodies move slow.

Chemical Bulletin No. 13, Part 6, just issued from the United States Department of Agriculture, is one of the series of bulletins reporting upon investigations relative to the adulteration of foods, drugs and liquors. For these investigations Congress provides a special appropriation to be expended under the direction of the Secretary of Agriculture. The part which has just appeared treats of the adulteration of sugar, molasses and syrup, confections, and honey and beeswax. It departs somewhat from the plan followed in the parts previously issued in devoting less space to the methods of detecting adulterants, and in giving greater attention to the extent to which adulteration is practiced. We will give it further comment next week.

R. C. Aiken, in the *Review*, says that not one-tenth of the alfalfa fields are given a chance to yield honey. It is cut for hay before full bloom, and it is only fields left for seed, or scattering plants, that yield the honey.

Louis Werner's apiary was destroyed by a bursting-cloud in Madison County, Ills., last Winter. He lost 100 colonies of bees, and now has 1,000 combs to melt up. With buildings, etc., destroyed, his loss is not less than \$700. As might be reasonably expected, he is now suffering with sciatic rheumatism, after having waded in the water all night to try to save his property. We sympathize with our brother in his sad affliction.

Queries and Replies.

Mating of Young Queens.

QUERY 819.—1. What is the ordinary distance from the hive that a young queen mates with the drone?—North Carolina.

I do not know.—E. FRANCE.

I do not know.—R. L. TAYLOR.

I "give her up."—H. D. CUTTING.

Nobody knows, or can know.—M. MAHIN.

Anywhere inside of three miles.—J. P. H. BROWN.

I do not know anything about this.—P. H. ELWOOD.

Ask Mr. Doolittle. I do not know.—J. M. HAMBAUGH.

This is guess-work. Probably a mile or so.—DADANT & SON.

We may all quote Dr. Miller now, for no one knows.—A. J. COOK.

I don't know. In all probability, near the home yard.—MRS. J. N. HEATER.

Some say a quarter of a mile, but more think a half mile or more.—C. C. MILLER.

I don't know, but I presume the distance is usually not more than a few rods.—C. H. DIBBERN.

I don't like to rob Dr. Miller of his "I don't know;" and if he says he knows, I shall want to know how he knows so much.—A. B. MASON.

No one can tell positively, but facts go to show that queens often, if not usually, mate at a distance of a mile or more from the hive.—J. A. GREEN.

This is a question on which there are many and varied opinions. I do not think that any one can answer positively from actual knowledge.—J. E. POND.

I don't know, but I am led to believe that *sometimes* either the queen or the drone flies a couple of miles; or else they meet between the two points.—EUGENE SECOR.

I don't know. I suppose it is varying from one rod to a mile or two. I don't know how far the drones go. I have known the black and yellow bees to mix four miles apart.—JAMES HEDDON.

That probably depends upon the number of drones flying at the time the queen makes her bridal tour; if there are plenty of drones in the air, she would not have to go far.—MRS. L. HARRISON.

My observation has been that the queen never flies far from the hive, but the drone, having powerful wings, flies long distances in the search for young queens.—G. L. TINKER.

From one-fourth to seven miles, according to the time of year, and other circumstances. One July and August I had one-fourth of my queens mate drones four miles away.—G. M. DOOLITTLE.

It is owing to circumstances. When drones are plentiful in the yard, I have thought one-half mile safe; but in rare instances they have been known to go from three to four miles. To divide the distance, I would say $1\frac{1}{2}$ to 2 miles. But to answer the question to the point, the ordinary distance my queens are mated is within a short distance from the apiary.—MRS. JENNIE ATCHLEY.

I really don't know if there is an "ordinary distance" connected with the matter. It depends so much upon circumstances that no one will ever be able to fix the ordinary distance of their flight. I once, to carry out an experiment, confined a virgin queen until she became so alarmed about her future usefulness that she mated in less than 15 minutes after being set at liberty. In this case she could not have gone far. As a rule, I think queens are mated within one-fourth of a mile of their home.—G. W. DEMAREE.

That question is surely "speculative." Who could definitely announce the "ordinary distance" of such a transaction, when it usually takes place beyond human sight? The facts are, that but very few have ever seen the act of copulation—so very rarely is it accomplished near the apiary. To answer the question as definitely as possible, it might be said that mating generally takes place within a radius of two or three miles.—THE EDITOR.

When Writing a letter be sure to sign it. Too often we get letters with the name of the post-office, but no County or State. One such came recently, and we looked into the Postal Guide and found there were places by that name in 13 States. Be sure to stamp your letter, or it may go to the dead letter office, in Washington, D. C.

The Flowers and the Bees.

G. W. Y.

In Spring-time's early morning,
When Winter's chill is past,
The flowers come adorning
Where'er the eye is cast ;

In woodland and on mountain,
In valley and in glen.
And 'round each bubbling fountain
The flowers bloom again.

Their fragrance cheers the saddened,
The sorrowing and oppressed—
Their beauty blesses, gladdens—
The flowers bring peace and rest.

Besides this glorious mission,
These fragrant blossoms bring
A wonderful transition
Among the bees in Spring.

Pent-up within each flower
Are drops of nectar sweet,
That form the "honey-shower"—
For men and bees, a treat.

Thus bees and flowers, together,
Are the sweeteners of earth,
And in the Spring-time weather,
Are full of life and mirth.

Chicago, Ills., May 2, 1892.

Topics of Interest.**Judging Bees at Fairs.**

GEO. F. ROBBINS.

Messrs. S. F. & I. Trego, on page 421, wonder where I got my "prevailing verdict" as to the superior qualities of darker Italian bees as compared with the lighter strains, and add, "Surely not in the advertising columns of the bee-papers, or in the number of orders such advertisers are receiving."

No, of course not. Messrs. Trego will certainly admit that the way anything, especially any new thing, is puffed in advertisements, is no evidence of worth. Too often it is quite the reverse, as with new varieties of grapes, strawberries, etc. Neither is the volume of orders the breeders of yellow bees are receiving, of itself proof of merit. Four and five banded bees are a comparatively new thing, and of course everybody wants to try some of them. The fact that they are having a boom now, is no proof the boom will last. That old customers are

coming back again is better testimony in their favor, and if the "prevailing verdict" is really in their behalf, I am ready to be convinced. I have no "ax to grind" in this case.

But I have in past years seen much in the bee-periodicals concerning the superior qualities of the darker strains, and condemning the growing practice of breeding to color. I believe such have largely had reference to Albinos—a type of bees, by the way, that are not now puffed so much as they used to be. Where I have seen such expressions I cannot now recall, except in two or three cases. One of the most pronounced I have seen is in the proceedings of the New York State Bee-Keepers' Convention of 1890, I think. I have not time to look it up, but as near as I can remember, it was claimed there that the leather-colored Italians went into sections more readily, gathered more honey, and capped it whiter than the yellower strains—a verdict that went unchallenged.

At the Sangamon Fair, last Fall, two eminent bee-keepers—J. M. Hambaugh and A. N. Draper—expressed themselves in favor of the darker Italians. Although I have not tested the two types thoroughly, I do rather lean toward their view, notwithstanding the fact that I had the yellowest, prettiest bees at the Fair—and got left in consequence.

Mr. Wallace, on page 548, repeats substantially the same view he freely expressed to me at the Fair. He argues for improvement of the races of bees by breeding, but his "improvement" seems to all lie in the line of color. He does make the same claim for his bees that is generally urged for golden Italians, etc., i. e., gentleness. But that superiority as honey-gatherers, and for other traits essentially accompanies beauty of color and quietness of disposition, remains to be proven.

I repeat, however, what I have intimated before, that I was not quite certain of my ground when I fixed that standard. That entire article was "thrown out as a feeler." I wanted the views of others. The questions now are, Shall the standard be settled in favor of the golden or five-banded Italians—the yellower the bees the higher the scoring? Or shall we have no standard at all, and give judges entire liberty?

The *Progressive Bee-Keeper* wants the two types recognized with a standard for each. That might do if Fairs would be willing to grant two or more premiums where they now grant one, and we knew it would not furnish a precedent that

would cause about forty-seven other eyes or strains to bob up and demand recognition.

After all, I have all along thought pretty much as Mr. Hutchinson expresses himself on page 383, viz: "I have little faith in judging of bees by looking at them at Fairs." If we could all agree on a standard, it would not be quite so hard; still I could take hybrids to a fair and enter them as Italians, that would show up as well as those that carried off the prize at Springfield last Fall. See my article on page 479.

Mr. Draper, as a member of the committee, appointed by the State convention last December, to draft a premium list, objected to offering premiums on single nuclei of bees. He would have it the "best display of bees," etc. I am not sure but the principal objection to that is, the precedent is all against it. The difficulty in fixing a standard, and the uncertainty in judging of quality, are all in its favor.

The principal reason for showing bees is to make an apiarian exhibit attractive, imposing, interesting, educating. To offer premiums on a general display of bees would bring as many and fine ones to a Fair as any other method, while rules and standards could be much more satisfactorily adjusted. But so long as the premium is to be awarded to the best nucleus, I see no reason to recede from my scale of markings.

That one given by Messrs. Trego, I deem very defective. They would give 30 points to size of bees, and only 20 to color, etc. What can we tell about the comparative size of bees in a glass cage? Is there any difference in the size of a golden Italian and a rabid hybrid? How much of a figure does that cut in determining race, purity or value? In fact, the only points by which we judge bees except as we observe their habits are color and markings. Yet they would reduce the scoring in this case down to 20.

To give only 5 points to style of hive is also a great mistake. In framing that code of rules I early settled upon this general rule, viz: An exhibit in any class should be marked on a scale of 100, that scale to be as nearly as possible subdivided as follows: Quantity, 40; quality, 40; style of display 20. That rule cannot be exactly adhered to in the case of nuclei of bees, but the last item can be more nearly than either of the others.

Now, the manner of arranging or putting up anything for exhibition is no slight affair, and in case of bees where it

is so difficult to judge of quality, and so much depends upon mere attractiveness, the style of house in which they are made to dwell, should not be so lightly esteemed. Style of hive is style of display, and should not be marked on a scale of less than 20.

Mechanicsburg, Ills.

Classification of Honey, Etc.

C. L. BUCKMASTER.

There is a great deal said on this subject, yet there seems to be no conclusion reached. There is no need of a classification in regard to variety of honey. All that is needed is 1st, 2nd and 3rd class honey, having reference to the way the honey is put into the sections, and the condition of the sections. Whoever heard of second quality basswood honey, or second quality white clover?

Now there might be different qualities of honey-dew, but who would try to sell the black stuff for anything but honey-dew? I believe the quality of honey taken from the apple-tree bloom a thousand years ago is exactly the same as it is now. I shall have my labels read, 1st class, 2nd class, or 3rd class honey; and leave a blank for variety.

STANDARD SIZE OF SECTIONS.

There ought to be a standard size for the honey section, and that size ought to contain, when filled in first-class style, just 16 ounces. The $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{3}{8}$, when filled in first-class style, with separators, just holds 12 ounces. The beekeeper cannot sell this for a pound package, and if he did, he would not be dealing honestly every time he sold one. Full weight is the only way to do business, and he who tries to do business with a short yard-stick, or a false gallon, or with light weights, will never succeed.

What would you think of a man that retails $4\frac{1}{4} \times 4\frac{1}{4}$, seven to the foot sections, for one-pound sections? You know that if you were buying you would be getting only one-half pound of honey, and your groceryman was lying just one-half a pound. Of course he would not deceive you, but how many innocent and ignorant are there who would be deceived?

If the bee-organizations of the United States do adopt a standard section, it is to be hoped, for the common honesty of the craft, that they select one that will hold 16 ounces of honey.

BEE-KEEPING IN CENTRAL MISSOURI.

School is out, and I am again in the apiary; but all is not happiness, for I find 10 of my 32 colonies dead, and about 6 others very weak.

I made a sad mistake last Fall, and have learned a good lesson which I will not soon forget. I know now that it will not do to rob with the expectation that bees will get plenty of Spanish-needle honey to winter upon.

While there was plenty of Fall-flowers where I was teaching school, and the bees filled their hives full of the finest Spanish-needle honey I ever saw, yet mine got scarcely any whatever. How easy it would have been for me to have reserved a few brood-combs full of honey, and had them ready for my starving bees. It is so easy to keep a hundred pounds of honey in brood-frames, and it is so easy to put them in by the side of a starving colony.

Columbia, Mo., May 6, 1892.

"The Winter Problem."

G. R. PIERCE.

About Feb. 1, 1892, I received a letter from Mr. D. C. Leach, of Walton, Mich., who was visiting his children in Springfield, Mo. He is an entire stranger to me, and his sending this letter expressing his pleasure in reading my book—"The Winter Problem"—was so hearty that I requested his permission to have it published in the AMERICAN BEE JOURNAL. I gather from what he says, that he has been a devoted lover of bees, though not strictly a "bee-keeper," as we generally use the word.

Blairtown, Iowa.

[The letter referred to by Mr. Pierce, written to him by Mr. Leach, reads as follows:—Ed.]

I have just finished reading, with deep interest, the "Winter Problem in Bee-Keeping." I like it. It confirms me in an opinion I have long entertained, that the instinct of the honey-bee was not a blunder on the part of the Creator.

I have been an amateur bee-keeper for the greater part of my life (I am now 69). In my earlier years I used the box-hives. My father before me used the "gum," a section of a hollow log, from 15 to 18 inches long. I do not remember that he ever had a colony frozen in Winter, and I cannot recollect

that I ever had, while I used the old-fashioned box-hives, although I lived in central Michigan, where the mercury often went below zero, and not unfrequently to 10° or 20° below. One Winter, I well remember, it went to 23° below zero, yet my bees, on the summer stands, without protection, came through all right; so, also, did those of my neighbors.

My hives were made of undressed inch boards; 12 inches wide. The height of the hives were from 14 to 18 inches; hence, inside measurement, was 10x12x14 to 18 inches. All parts of the hive, except the entrance at the bottom, were, after the bees had done their part, absolutely air-tight. There was no chance whatever for "upward ventilation."

Well, I never was an "old fogey;" I believed in "keeping up with the times," so I accepted the movable-frame hive, and with it the "upward ventilation" theory. Yet I never in my life prepared my bees for Winter, with the cushion and chaff above them, without wondering why they were imbued with the instinct to make the top and sides of their hives air-tight. I never could feel that I was doing quite the right thing by them when I removed the perfectly sealed top board, and gave them the cushion and chaff. But I was a busy man, giving a few hours of recreation to my bees, while all wise men, who made bee-keeping a business and a study, said it was the thing to do. So I did it. I might have seen that the bees, with the Creator on their side, were wiser than all their keepers.

Now, do not your experiments show that the form of our hives might be improved? Would not a hive 10x10x20, or 10x12x18 inches, inside measure, be an improvement? In such a hive a strong colony, in Winter, would be able to occupy all except the two outside frames, and, with their stores nearly all above them, could move gradually and safely upward, thus utilizing the heat given out by the cluster. I have so much faith in this view of the matter, that if I were a young man, and situated so I could attend to it, I would try the experiment.

Referring to what you and Rev. W. F. Clarke say as to why bees select their homes in trees high up from the ground, I will simply remark that it is because they find the hollows and the holes to get into them some distance above the earth.

There are probably a hundred trees that furnish them accommodations from

20 feet upwards, where there is one that would suit them lower down. I have seen bees that I am confident were scouts hunting a home, begin near the ground and examine upwards. I have also known them to locate within 3 feet of the ground, and even in a box-trap set for rabbits. D. C. LEACH.

Do Bees Injure Fruit Crops?

W. S. DOUGLASS.

The question, we are sorry to say, of bees injuring the crops, has had many advocates. It is nothing but a silly prejudice against bees, entertained by some covetous fruit-growers, based on the notion that the crops are injuriously affected both in quantity and quality. It is an unfounded notion, and it deserves no support from close observation and science. Yet it occasionally looms up, and creates much alarm, as the comet did in the past days.

I claim that nectar passes off and is lost if not collected by the bees. It is the sweet secreted by the flower which produces this nectar.

A gentleman in France, several years ago, established a green-house and stocked it with a great variety of choice fruit-trees, expecting to have bountiful crops. Time passed, and every year there was a super-abundance of blossoms, but very little fruit. Various plans were devised and adopted to bring the trees into bearing, but without any success until it was suggested that the blossoms needed fertilization, and that by means of bees the needed work could be done. A colony of busy workers was introduced the next season, and the remedy was a success. There was no longer any difficulty in producing crops there. The bees distributed the pollen, and the setting of fruit followed naturally.

But some will contend that bees do injury to the crop by extracting the honey from the bloom; and they will say that it is reasonable that if a portion of the plant is taken away by the bees, there must be a less quantity of material left for the formation of seed! It is a fact that if a person has an opinion formed, he will build up strong proofs in his favor, which, he thinks, he can substantiate by satisfactory reasons.

The flowers expand, and a set of vessels pour into the cup, or nectary, a minute portion of sweet liquid; and strong testimony proves very plainly

that it never again enters the stalk or flower, but there it evaporates like water. For instance, in passing a field of horsemint in full bloom, we are assured of the presence of honey, by the odor in the air. Now, what is the difference, whether this honey passes off in the air, or whether it is collected by the bees. If any difference, it appears in favor of the bees getting it, for it thus answers an important end in the economy of nature.

Instead of the bees being an injury to the crop, I shall prove that they are an advantage. The stamens and pistils of flowers corresponds to the different organs and sexes of the male and female. The stamen is the male, which furnishes the pollen; the pistil is the female, which must be impregnated by this dust or pollen from the stamen, or no fruit will be produced.

This is fully accomplished by the bees traversing from one flower to another, and carrying the pollen, sticking to their legs and wings, to the next flower, and impregnating the pistils of it. This was the case with the Frenchman's greenhouse. The necessity was seen and planned by the all-wise Creator. He has created the bee for the flower, and the flower for the bee; endowed the plant with the power of secreting the liquid sweet, and given the honey-bee the instinct to search after it and treasure it up for its own as well as for man's wants.

The prejudice against bees injuring the crops has no foundation, and I hope that the day is dawning when it will wholly disappear.

Lexington, Texas.

A Few Apiarian Don'ts.

J. A. NASH.

Don't make a veritable curiosity shop of your apiary, by filling it with a job-lot of hives of all the different patterns you can hear of, just to see which is best.

Don't wait until there is a heavy honey-flow from clover or basswood before you order those new hives and sections.

Don't write a long, abusive letter to the suffering supply dealer about July 15, asking him why those sections you ordered by telegraph yesterday noon had not arrived at the depot.

Don't sell your honey in any shape, and for any price your local grocer may see fit to pay you.

Don't go to dinner and leave that big swarm of Italian bees hanging in the hot sunshine.

Don't make that common mistake of crating the nice white sections next to the glass, and the dark ones in a "family group" in the center.

Don't put in too much time talking politics at the village store during swarming time.

Don't put off that little job of September feeding until the following Spring, and then wonder how it comes that some people have such luck with bees!

Don't leave your bees out so late in the Fall that you have to chop the ice off the hives before you can house them.

Don't——; but I know you will—some of you.

Monroe, Iowa.

Hive for Wintering on Summer Stands.

BENJ. E. RICE.

I wish to offer something to those that are interested in bee-culture, and especially that class of bee-keepers that are always ready to grasp a good thing when it is offered to them.

How often, when we read about some new hive or convenience used in the apiary, have we wished that we had it, and if it were not for the words attached to it—"patent applied for"—we could easily make all we wished ourselves.

Now let me tell something pertaining to wintering bees on the summer stands, which I have tried myself, and it has proved to be very successful, and also saved a good deal of hard work, and much anxiety during the long Winter months. It is simply to take the hive that one may already be using, and add material to its outside dimensions which makes it as good, if not better, than the celebrated chaff hives to Winter bees in.

It is constructed as follows: First, take oiled building-paper and cover the outside of the hive, then furrow up with lath, and cover over with oiled paper again; then one more course of lath, then cover again with oiled paper, and then cover the entire body of the hive with good ceiling, or some other good material. This makes three courses of oiled paper around the hive (or brood-chamber), and one course of ceiling, making two dead-air spaces.

There is also one course of oiled paper on the bottom of the hive, covered

over with half-inch material, making a double bottom.

These hives, made in this way, are pretty heavy to handle, but not nearly so bungling as the chaff hive, if I am not misinformed about them.

There is another decided advantage about these hives, and it is because they are cool in Summer, and do not need to be shaded. The bees are less inclined to cluster on the outside of them in hot weather, as they do in single-walled hives; and the cost of this hive complete, without inside furniture, is between one-third and one-half cheaper than the chaff hive, and there is no patent on it. This hive can be made from new material for about \$2.50 each.

Last Fall I made 14 of them, and transferred the same number of colonies into them; prepared them for Winter, by giving them enough honey for the purpose, and left them on the summer stands, which are about 16 inches above the ground. During the Winter they had two or three cleansing flights, which, I think, helps them a good deal.

I did not lose any of the colonies, and they are much the best at the present time (April 30) that I have in my yard. My other bees were wintered in a cellar, which was too damp, and I have fully decided to entirely do away with cellar wintering, and, in fact, all other methods of wintering, only on the summer stands in well-protected hives.

All of my bees are now in the Winter hives, and I dare say they appreciate it, as the weather remains down to the freezing-point and snow-squalls.

My bees have wintered fairly well, and I have no reason to complain. I have lost only 5 colonies up to the present time.

Boscobel, Wis.

Taking Bees Out of Cellars.

FRANK COVERDALE.

The time of taking bees out of cellars is a matter of grave importance, second to that of wintering well. He who takes his bees out of winter quarters early in March, or even late in March, is very likely to have great loss of colonies, not only weakened in numbers, but many will die outright. During the first half of April they will dwindle enough.

As years pass, I become still more convinced that each hive should be faced to the north as soon as taken from the

cellar; and still I am just as much in favor of not preventing that chilly northern breeze that serves so well to keep the bees at home on days not fit for them to fly. If you can save the old bees through April, you need not fear, for good results will follow; but if one-third to one-half be lost by the chilly breezes of early Spring, it will be hard to bring them up to good strength for the clover honey harvest.

Now (May 6) my 72 colonies have just been overhauled, and found without exception in normal and uniform strength of old bees (3 colonies have died since moving from the cellar), the most variation being in the difference in brood-rearing, as some queens are more prolific, while others do not lay as many eggs as the old bees can keep warm. The reason of this is that no honey of any account has been gathered as yet this Spring. It is cold and rainy, and as there is not going to be much fruit-bloom, I think I will have to feed to keep up brood-rearing.

If the bees could have gotten out, nectar was quite plentiful both from maple and willow. Again, bees have not as yet been able to secure enough pollen to keep up rapid brood-rearing.

The loss of bees in this part of Iowa has been very heavy. Just three miles southeast of my apiary, where over 200 colonies were in good condition, now only about 40 remain. North of here the situation is some better. Many of the bees were taken out of cellars early, which, with honey-dew, has caused the heavy loss.

Now, as many of the bees are dead, and much of the white clover is destroyed by the freezing of snowless Winters, we may have clover in proportion to the bees that are left.

Welton, Iowa.

Comb-Honey Grades Settled at Last.

A. B. MANN.

California wants to help Missouri out on his article on page 549, and have it settled. We will settle the grading question on Mr. Weller's basis, and have done with it.

Here we have the true inwardness of the grading question. Make your comb-honey into nine grades, so as to give the middleman a fair chance (at you), and then mark it so that the "uninitiated" can't "get onto" the combination; that will give the middleman nine chances at

the producer, and nine more at the consumer; and if "practical use indicates the need of additional grades or sub-grades," why, give them nine more!

Now, here comes "Old Californy" to help "Missury" out. The two States have been good friends since "'49;" so we don't mind helping you again.

Now instead of that W. A. D. of capital letters to indicate the grades, let us have something deeper, that the uninitiated cannot fathom so easily. Let us do it with colored pictures. We can use the "colors of our country" (just enough for each class). Let us have a Bee rampant, for the Best Class, Red, White or Blue to indicate the grade. Then a Bee Couchant for a Middle Class, grades to be indicated by the colors. Then for the Worst Class, just an ordinary "Be Durned;" thus a Blue Be Durned would indicate the worst that could be expected.

If the uninitiated "get onto" these markings, why, change it next year.

Now that the grading is settled, the rest of the time until honey comes on the market again, can be devoted to convincing the world that comb-honey can be produced for 3 cents a pound, and perhaps it can be, by a certain class, that write for the bee-periodicals something like this: "I bought 2 swarms last Spring, and increased them to 6; wintered them in a trench, and they are all dead; but I am going to buy a swarm of blacks, and try it again. I am feeling first-rate this Spring."

I am willing to let "Berlin, Mo.," have this grading scheme all to himself. I am running about 200 colonies for comb-honey this season, and if my bees try to ring in any honey on me that I cannot sell in two grades, I will make them eat every drop of it, if I have to wait until next Spring to get the chance. California.

Does Alsike Clover Pay?

M. M. BALDRIDGE.

Hon. Matt. Anderson, of Dane county, Wis., writes me under date of May 3, 1892, that for a number of years he has sown no red clover, but Alsike instead; that in 1891 he had 45 acres which he cut for seed, which gave him 189 bushels, and that he intends to save the same 45 acres for seed this year. As Alsike clover seed is worth about \$9 per bushel at wholesale, this Spring, the

reader can judge whether or not it pays to grow Alsike.

Mr. A. says he does not mix Alsike with red clover, or timothy, when grown expressly for seed, but for pasture he mixes timothy with it. This Spring he has sown 70 acres to Alsike, all with small grain. Owing to the severe drouth last year, Mr. A. has had to plow up nearly 50 acres sown to Alsike in the Spring of 1891.

Besides the 45 acres which Mr. A. intends to save for seed this year, he has about 60 acres, chiefly Alsike, that he will pasture. There are a number of others in Dane county, Wis., aside from Mr. A., who make the growing of Alsike clover seed almost a specialty.

I think the growers of Alsike clover seed in Dane county, Wis., make a big mistake by trying to grow Alsike by itself. I should certainly mix it with red clover—the medium variety. Red clover will furnish shade to the Alsike, and insure it against the effects of drouth. As red clover seed is considerably larger than the Alsike seed, it is but little trouble to separate them from each other. I can see no objection to the mixture. Can you, reader?

St. Charles, Ills., May 10, 1892.

Interesting Questions for Beginners.

F. H. RICHARDSON.

On Jan. 31, 1892, my father, Jno. Richardson, departed this life, leaving me, among other things, 61 colonies of Italian bees. I had never had the slightest experience with bees, and when I say that I had never seen a queen, or even the inside of a hive of bees, you can guess the "pickle" I was in. Among father's books, however, I found the "A B C of Bee-Culture," and I at once began to study. I do not know what I should have done without it. It is simply invaluable. The AMERICAN BEE JOURNAL was also a very great help to me.

The bees wintered on honey-dew in a bee-cellar without ventilation, and were in one section of the Heddon hive, except 10 colonies in Langstroth hives. The upper sections of the brood-chamber were filled with sawdust, and over the bees was a common wooden butter-dish, such as you get butter in at the stores, and one thickness of coarse muslin (unbleached).

The bees were weak when I took them out, but were also weak last Fall. A

good many had the diarrhea, but are well now—none were dead. I took the dirty combs from them that had it badly, and substituted nice, clean ones. So far I like the Langstroth hive the best, on account of its being so hard to get the frames out of the shallow brood-chamber of the other hive. They fit so tightly endwise.

Two days after putting the bees out, I was away 24 hours, and lost 5 colonies by robbing, which nearly frightened me, but I think it cheap experience.

So far I have successfully introduced one queen by the "Peet" process, and united 4 weak colonies. Yesterday, while examining brood, I found some of the cappings in one hive cut off, and a worm $\frac{3}{4}$ of an inch long in one of the cells containing larvae almost ready to hatch. What was it? What were those worms?

In preparing the lower section of Heddon brood-chamber to put on, I am putting one frame of honey on each side, and one frame of bee-bread on one side next to the honey, then filling up the center with empty combs, and when I put them on I thought that in strong colonies I would take a frame of brood from the upper section and put in the center. Am I doing right?

How can I tell at sight when a bee is loaded with honey? I was not able to understand how to spread the brood-nest, so I just put on empty brood-combs in the center. Is that right?

We are having a very wet Spring in Missouri. Fruit is in bloom, and bees are carrying pollen, but not much, if any, honey. Prospects are good for white clover. Here white clover and Spanish-needle furnish the principal honey crop. Will Dr. Miller please answer my questions?

Moberly, Mo., May 2, 1892.

Dr. Miller's answers to the questions asked by Mr. Richardson, are as follows:

"The worms were, I think, the ordinary wax-worm. They are often found in a cell, very much as larvae of a honey-bee is coiled up in the cell, with very little appearance of a web about them, although generally they have a silken gallery.

"In doubling the hive room by adding an additional half-story, if the bees need honey given to them, I am not sure that it would not be just as well to put it nearer the center, so that the bees would

have it more convenient, and then they could fill up the combs with brood as fast as emptied of honey, but your way answers very well. It may, or it may not be best to take a frame of brood from the old half-story to give to the new. If the bees are strong enough to cover more brood than they already have, and a frame of brood is taken from the full half-story and given to the empty one, two things will be accomplished—the bees will hasten to occupy the empty frame put in place of the full one, and they will be sure to occupy the new half-story at once, at least so far as to cover that one frame of brood. But if they were already doing their best in the way of covering brood, then you are simply making sure to have some of it deserted and chilled.

"Generally you will not find the bees very slow about going into the added half-story if they need it. Putting the added section *over* the one already occupied, will insure its occupation quite promptly, without the bait of a frame of brood, the only objection being that the bees are obliged to keep so much more space warm.

"The only way that I know of to tell for certain whether a bee is loaded with honey, is to pull it in two, when the contents of the honey-sac will be seen. Although this method of examination gives very conclusive results, it has the disadvantage that the future usefulness of the bee is somewhat impaired. If you are a close observer, you may see a difference in the size of bees just starting to the field, and of those just returning. But no matter how plump the returning bee, you are not sure whether it is full of honey or of water, merely by its outward appearance.—C. C. MILLER."

Convention Notices.

ILLINOIS.—The Capital Bee-Keepers' Association will meet in the Supervisor's Room of the Court House at Springfield, Ill., at 10 a. m., on May 25th, 1892. C. E. YOCOM, Sec. Sherman, Ill.

CONVENTION DIRECTORY.

Time and place of meeting.

1892.
May 25.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.
May 28.—Haldimand, at Nelles' Corners, Ont.
E. C. Campbell, Sec. Cayuga, Ont.
Sept. 7, 8.—Nebraska, at Lincoln, Nebr.
L. D. Stilson, Sec., York, Nebr.
Oct. 7.—Utah, at Salt Lake City, Utah.
John C. Swaner, Sec., Salt Lake City, Utah.
1893.
Jan. 13, 14.—S.W. Wisconsin, at Boscobel, Wis.
Benj. E. Rice, Sec., Boscobel, Wis.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Eugene Secor, Forest City, Iowa.
SECRETARY—W. Z. Hutchinson, Flint, Mich.

National Bee-Keepers' Union.

PRESIDENT—James Heddon, Dowagiac, Mich.
SECY AND MANAGER—T. G. Newman, Chicago.

Bee and Honey Gossip.

Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Bright Prospects for Honey.

The prospects have never (for a great many seasons) been so bright as they are now for a good flow of white clover honey; and the outlook for a prosperous season for the bee-keeper is grand.

A. N. BROWN.

Glen Haven, Wis., May 12, 1892.

To the Bee-Keepers of Indiana:

It is now believed that our State is one of the foremost, if not the very best, honey-producing State in the world, both in quantity and quality; therefore, at the meeting of our State Bee-Keepers' Association it was decided to prove the justness of our claims by meeting in competition the entire world, at Chicago next year, with our product, bees, honey, implements and flowers. But, to be successful, will require union and immediate action on the part of our most careful apiarists, as the honey must be gathered within a few weeks, and from our present crop. The pre-

miums are very liberal, and will be fairly divided among the Hoosiers who help gain them; while the high honors, which are far more valuable, we will bequeath to the children of our fair land. Our entire work is now mapped out, and we desire every county in the State represented by one or more reliable bee-keepers, to whom will be forwarded at the proper time the work assigned them, with instructions. The Presidents or Secretaries of each Fair association of our State will please forward to us at once, the address of one or more of their most energetic apiarists. We guarantee to do the rest. Nothing but prompt action at this time will insure success.

R. S. RUSSELL,

Pres. Ind. State Bee-Keepers' Ass'n.
Zionsville, Ind., May 7, 1892.

Very Backward Spring.

To-day is very cold and wet. The bees are confined to their hives as they have been most of the time this Spring. My loss the past Winter and Spring has been about 70 per cent., and those that were left are in very poor condition for this time of the year. The cause of loss, I think, began about July 10, 1891; white clover failed about that time, and we got no Fall flow, consequently the bees were in poor condition for Winter. Everything is behind time here this Spring. Gooseberries are only beginning to blossom. Plum and cherry trees will bloom in a week or so, if the weather turns warm soon. Corn-planting will be two weeks late, at least.

C. B. DARROW.

Langworthy, Iowa, May 9, 1892.

Out-Door Wintering of Bees.

Score another for out-door wintering. According to the reports in the AMERICAN BEE JOURNAL for May 5, of Messrs. Judkins, Snow, Hines, Norton, and numbers of others, all cellar-wintering advocates, give their losses running from 20 up to 50 per cent. Last season was the poorest, in my recollection, in this locality, with the mercury as low as 20° below zero in Winter, and poor honey to winter on, yet my loss is only 7 per cent. The bees were on the summer stands, and the loss would not have been so heavy, but I had *La Grippe* to attend to (or rather, it attended to me), so I could not wait on it and the bees at the same time. My bees are doing finely now.

T. C. KELLY.

Slippery Rock, Pa., May 7, 1892.

Sour Honey and Dead Bees.

I neglected to report the condition of bees in this section last Fall, but heard nothing uncommon, so it is not particular. Bees have come out pretty well, but are spring dwindling, or dying off after they were taken from the cellar, or unpacked. There seems to be some kind of thin, watery honey that runs out of the combs where bees have died. Is it sour honey, unfit to seal over? or is it something else? Does that thin, sour-tasting stuff have anything to do with the bees dying? I put 24 colonies of bees into the cellar last Fall; some were late swarms that came out in August. I lost 2 during the Winter, and 5 more during the Spring. They all seemed to have honey. The weather is backward; fruit-trees are ready to blossom, but bees can only fly a day now and then. It is cold, wet weather generally. The Italians are the best of all the bees I have seen. I do not need a bee-veil or gloves to handle the Italians.

IRA N. LYMAN.

St. Peter, Nebr., May 3, 1892.

[In all probability the sour honey mentioned is what caused the death of the bees.—Ed.]

Unfavorable Weather for Bees.

Bees have wintered poorly in this part of Michigan. The average loss will probably be 50 per cent. Two-thirds of mine have pulled through up to date, but these cold east winds are using them up, and preventing brood-rearing; but warmth is coming.

WM. ANDERSON.

Imlay City, Mich., May 10, 1892.

How the Bees Wintered.

It has been a hard Winter on bees, as near as I can find out by inquiring. Three-fourths of the bees in this county are dead. (Some have lost all.) I put 32 colonies into a cellar on Nov. 17, and by Feb. 1 they commenced to die, and I commenced to feed sugar candy, but die they would. It was so cold that I could not get them out for a flight, and they died in a filthy mess. Diarrhea was the cause, or poor honey. To-day finds me with but 9 colonies out of 32. One colony that I transferred and gave an Italian queen in September, and fed sugar syrup, wintered nicely. Give me one kind of food, and plenty of it with young bees, and it will be all right. One old lady has lost all her bees. She says

she does not see what made them die; the hive was chock-full of comb. One old man lost all of his, and wants to get some more. They were in box-hives. He says his nephew had some in those new-fashioned hives, and they died! He thought they would not die in them. I gave him a bundle of bee-papers—the first he had seen. If he reads them he will learn something, even if he is 80 years old.

CHARLES TAREY.

Houghton, N. Y., May 8, 1892.

No Loss in Wintering.

My bees have not had a good flight since Oct. 19, 1892, and on Nov. 16 I put 68 colonies into winter quarters. To-day I have taken them from the cellar all alive and well. This is the first good day there has been this Spring. There is no brood in any of the hives that I have opened. My bees are the strongest that they have ever been when removed from the cellar. They were all wintered in a room in the cellar 9x9 feet, and 7 feet high. I think I can "take the cake" on wintering bees.

M. F. CRAM.

West Brookfield, Vt., May 9, 1892.

Willows and Wild Flowers Blooming.

Bees wintered well. It is a cold, windy Spring—not much for the bees to get. The willows are in bloom now, and some wild flowers are coming. Raspberries and blackberries will soon be in bloom, and then the bees will be all right.

S. STOUT.

Udall, Kans., May 10, 1892.

Colonies Short of Stores.

We have had a hard times for bees the past Winter and this Spring; the loss will be serious, nearly one-half. They have only had a chance to work about one day in ten, since put out of the cellar, and most colonies are short of stores.

W. ADDENBROOKE.

North Prairie, Wis., May 10, 1892.

Lots of Honey Left.

I have 4 colonies of bees. They were put into the cellar late in the Fall, and I never looked at them until the beginning of April, when I look them out, and they had lots of honey left yet. They seem to do first-rate now.

H. W. BRAUER.

Stevens, Ills., May 10, 1892.

Comb-Foundation for Sections.

Which is considered best, to use starters or full sheets of foundation in sections? Bees have wintered well in this locality, but the Spring has been very cold since they left their winter quarters.

W. G. WORDEN.

Guilford Centre, Vt., May 11, 1892.

[The large majority use full sheets of comb-foundation in the sections. Only thin, made especially for that purpose, should be used for comb-honey.—Ed.]

Wavelets of News.

Preserving Empty Combs.

If you have a lot of empty combs on hand, and wish to preserve them for future use, they will have to be looked after carefully when warm weather approaches, else the moths will destroy them. After the combs get thoroughly dry, the best place to keep them is in a cool, dry cellar—so cool that the eggs of the moth will not hatch, and so dry that the mold will not ruin them. If it is not practical to preserve them thus, they may be saved almost anywhere by hanging the combs about an inch apart.

Combs are seldom destroyed by worms unless they are close enough together to allow the moth to build their web between. As combs hang naturally in a hive, they are too close to save well without bees on them.

Spiders are friends to the bee-keeper, if he has empty combs to preserve. Let them build their web between the combs and worms will never be seen. Perhaps it will pay for bee-keepers to start a spider farm. They are useful animals. —EUGENE SECOR, in the *Farmer and Breeder*.

Queenless Colonies.

Such need not be lost, nor united to other colonies. Another queen should be procured as soon as possible from some reliable dealer.

This will not be a paying operation, however, if the colony has become very much depopulated, as in that case there would not be enough bees to nurse and protect the bees.

Before the queen is introduced, the combs should be carefully examined to see if there is not an old queen, or a virgin queen which might have been

reared after the laying or missing queen had either died or been superseded.

If the bees have long been queenless, the fact may be determined by the manner in which the brood in the combs is capped. When a colony has been without a queen six weeks, there is usually more or less scattering brood in the cells. This brood is capped the same as any drone larvæ (raised caps), but is in the same cells in which the worker-bees are reared. This brood is the work of laying workers. In my opinion nearly every bee in the hive has a hand in laying these eggs, and not one particular bee.

If there is a large number of bees in the hive, it is safe in most cases to give them a queen, and at the same time take a frame of brood from some strong colony and place it in the brood-nest. The bees in the queenless colony are probably too old to nurse the new brood, and the newly-hatched bees will be needed to do such work. In all such cases of introduction of queens, use tobacco smoke.—*American Apiculturist*.

Seasonable Hints.

If you have not yet ordered all the things you will be sure to need, do so without further delay. It will not do to wait until the swarming season is on hand, and then order hives, sections, etc., and expect them by return train.

Boon the bees in every possible way now, by feeding, etc., so that the first of June will find the hives literally "running over" with bees. Never mind honey just yet, but get the bees, and let them "do the rest."

It is of no use to put on a lot of honey sections over the brood-chamber to conduct the heat away as soon as fruit blossoms, as it will only result in loss to the bees, and no gain in surplus honey. Before giving extra room on top, be sure that the brood-frames are all occupied.

After all, about the best way to get the wax out of old combs, is to mash them up in cold weather, soak them a day or two, and then boil the mass with plenty of water. To separate the wax from refuse, scoop all into a strong burlap sack and press out all the wax possible. Repeat the pressing as long as any wax remains. The refuse will be good kindling when dry, to start the fire with.—C. H. DIBERN, in *Western Plowman*.

Supply Dealers should write to us for wholesale terms and cut for Hastings' Perfection Feeders.



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Advertisements intended for next week must reach this office by Saturday of this week.

ALFRED H. NEWMAN,

BUSINESS MANAGER.

Special Notices.

Send us one new subscription, with \$1.00, and we will present you with a nice Pocket Dictionary.

The date on the wrapper-label of this paper indicates the end of the month to which you have paid. If that is past, please send us a dollar to pay for another year.

Systematic work in the Apiary will pay. Use the Apiary Register. It costs:

For 50 colonies (120 pages)	\$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

As there is another firm of "Newman & Son" in this city, our letters sometimes get mixed. Please write *American Bee Journal* on the corner of your envelopes to save confusion and delay.

To my Patrons:

I do not know that I have a dissatisfied customer, yet as a good many orders for queens were received through an order in this paper, I desire to say that I will be ready on and after June 1, 1892, to make good all claims for queens on unfilled orders, and for those queens that did not come up to my guarantee. No queens mailed until the claimant notifies me of his readiness to receive her. This notice is given so that no one will have reason to make complaint of me in the Fall, after the queen-rearing season has passed.

HENRY ALLEY.

Wenham, Mass.

In the May number of the "Phrenological Journal and Science of Health," a gentleman who has distinguished English journalism, gives striking testimony for the usefulness of Phrenology. It is Mr. Wm. T. Stead, whose portrait stands in the opening page. Some views of Persia, from the sketch book of a lady traveler follow. The editorial matter is suggestive and varied, as usual. Fifteen cents a number, or \$1.50 a year. Fowler & Wells Co., 25 East Twenty-first Street, New York.

Well Pleased.

The extractor and smoker that you sent me are very fine machines, and I am very well pleased with them.

I. G. OLSSON.

St. Paul, Minn.

Our Sewing Machine.

I have received your premium sewing machine, and am well pleased with it. My wife says that it does as good work as a machine that would cost \$35 or \$40 here. I would advise any one wanting a sewing machine to get one, because it is as good as any.

Lisbon, Tex.

J. D. GIVENS.

Near to Perfection.

I must have a binder for the BEE JOURNAL this year, for I think that you have now got it to as near perfection as anything can be on earth.

Naugatuck, Conn.

R. DOWNS.

YOU NEED an Apiary Register, and should keep it posted up, so as to be able to know all about any colony of bees in your yard at a moment's notice. It devotes two pages to every colony. You can get one large enough for 50 colonies for a dollar, bound in full leather and postage paid. Send for one before you forget it, and put it to a good use. Let it contain all that you will want to know about your bees—including a cash account. We will send you one large enough for 100 colonies for \$1.25; or for 200 colonies for \$1.50. *Order one now.*

Supply Dealers desiring to sell our book, "Bees and Honey," should write for terms.

We Club the American Bee Journal and the Illustrated Home Journal, one year for \$1.35. Both of these and Gleanings in Bee Culture, for one year for \$2.15.

If You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a new 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25c.

Please send us the names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you.

When talking about Bees to your friend or neighbor, you will oblige us by commending the BEE JOURNAL to him, and taking his subscription to send with your renewal. For this work we will present you with a copy of the Convention Hand-Book by mail, postpaid. It sells at 50 cents.

HONEY AND BEESWAX MARKET.

CHICAGO, May 14.—Fancy comb honey is selling at 16c.; choice, 14@15c. Other grades 10@13c. Extracted, scarce, good demand, at 7@7½c. Beeswax, active sale, 28c.

S. T. FISH & CO., 189 S. Water St.

NEW YORK, May 14.—No demand for comb honey excepting fancy white. Quite a stock on the market of off grades and buckwheat. New Southern extracted arriving and sells at from 70@75c. per gallon for choice; 65@70c. for common. Beeswax quiet but firm at 27@29

HILDRETH BROS. & SEGELKEN,
28-30 West Broadway.

KANSAS CITY, Mo., May 14.—Demand light, supply large. Prices: No. 1 white comb, 13@14c.; No. 2 white, 10@12c. Extracted, white, 6@7c.; amber, 6@6½c.; dark, 5c. Beeswax—Demand good, supply light. Price, 22@27c.

CLEMONS, MASON & CO.,
Cor. 4th and Walnut Sts.

CINCINNATI, May 14.—Demand is slow for comb with good supply. Price, 12@15c. Demand for extracted is fair at 5@8c.

Beeswax is in good demand, at 25@27c for good to choice yellow.

C. F. MUTH & SON,
Cor. Freeman & Central Aves.

NEW YORK, May 14.—Demand for honey is very moderate, supply good, exceeding the demand. There is little demand for fancy 1-lbs. Market pretty well cleaned up of that grade, but plenty of fair. Prices: Comb, clover, 8@12c.; buckwheat, 7@9c. Extracted, clover, 6½@7c.; buckwheat, 5½@6c. Beeswax—Demand fair, supply plenty for demand, at 27@29

CHAS. ISRAEL & BROS., 110 Hudson St.

KANSAS CITY, Mo., May 14.—Demand poor, supply light of comb. Fancy 1-lbs., 12@13c.; dark, 8@9c. Extracted, white, 7c.; dark, 5@6 No beeswax on the market.

HAMBLIN & BEARSS, 514 Walnut St.

DETROIT, May 14.—The demand is slow, and supply fair, and will be absorbed by time new crop comes. Comb, 11@12½c. Extracted, 7@8c. Beeswax—Demand moderate, supply fair; price, 27@28c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, May 14.—Demand fair and supply short on fancy stock. Comb, 14@15c. Extracted, slow sale at 6@7c. Beeswax—Demand good, supply short on prime yellow; price, 25@28c.

J. A. LAMON, 44-46 S. Water St.

MILWAUKEE, May 14.—Demand very moderate, supply average of all grades but common quality. Best 1-lbs. 15@16c.; common, 12@13c. Extracted, white, in barrels, 7c.; in kegs, 7½c.; in pails, 7½@8c. Beeswax—demand fair, supply small. Price, 23@28c.

A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO, May 14.—Demand light, supply light. Comb, 10@12c. Extracted, 5@6½c. Beeswax—Demand fair, supply light. Price, 25@27c. A fair to good honey crop for 1892 is expected.

SCHACHT, LEMCKE & STEINER,
16 Drumm Street.

NEW YORK, May 14.—Demand is light, and supply large, except buckwheat comb. We quote: Fancy white comb, 12@14c.; buckwheat, 9@11c. Extracted—Clover and basswood in good demand at 6½@7c.; buckwheat in demand at 5@6c. Beeswax in fair demand at 26@28c.

F. I. SAGE & SON, 183 Reade St.

CHICAGO, May 14.—Demand is slow, supply fair, but not excessive, and market should clean up. Prices: Comb, 15c. is about the top. Extracted, 6, 7@8c.; supply small. Beeswax—Demand good, supply better than last season. Price, 27c. for yellow.

H. A. BURNETT, 161 S. Water St.

BOSTON, May 14.—Demand is light, supply fair. We quote: 1-lb. fancy white comb, 13@15c.; extracted, 6@7c. Beeswax—Demand fair, supply light. Price, 28c.

BLAKE & RIPLEY, 57 Chatham St.

MINNEAPOLIS, MINN., May 14.—Demand is moderate, supply of dark is large, but white is not so plentiful. Prices: Dark comb, 10@13c.; white, 15@17c. Extracted, supply plenty. Beeswax—Demand good, supply small.

STEWART & ELLIOTT.

ALBANY, N. Y., May 14.—Demand is very little for comb at 8@12c. Market quiet. Extracted, 6@7c. Beeswax in good demand at 28@30c. for good stock.

H. K. WRIGHT, 326-328 Broadway.

NEW YORK, May 14.—Demand moderate, and supply reduced, with no more glassed 1-lb. nor paper cartons, 1-lb. We quote: Comb, 1-lb., 14@15c. Extracted—Basswood, 7½@7¾c.; buckwheat, 5½@6½c.; Mangrove, 68@75c. per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c.

F. G. STROHMEYER & CO., 120 Pearl St.

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a simple Manual of Parliamentary Law and Rules of Order for Local Bee Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with Subjects for Discussion. In addition to this, there are about 50 blank pages, to make notes upon, or to write out questions, as they may come to mind. They are nicely bound in cloth, and are of the right size for the pocket. We will present a copy for one new subscription to the BEE JOURNAL (with \$1.00 to pay for the same), or 2 subscribers to the HOME JOURNAL may be sent instead of one for the BEE JOURNAL.

Prompt Shipment.

I have received the sections and foundation all right. Thanks for your promptness. The freight on the sections was only 75 cents.

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Busy Bees, and How to Manage Them, by W. S. Pouder. Price 10 cents. For sale at this office.

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We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the *American Bee Journal* must be sent with each order for another paper or book:

	Price of both.	Club
The <i>American Bee Journal</i>	\$1 00....	
and Gleanings in Bee-Culture.....	2 00....	1 75
Bee-Keepers' Guide.....	1 50....	1 40
Bee-Keepers' Review.....	2 00....	1 75
The Apiculturist.....	1 75....	1 65
Canadian Bee Journal.....	2 00....	1 75
American Bee-Keeper.....	1 50....	1 40
The 7 above-named papers &.....	5 75....	5 00
and Langstroth Revised (Dadant).....	2 40....	2 25
Cook's Manual (1887 edition).....	2 25....	2 00
Quinby's New Bee-Keeping.....	2 50....	2 25
Doolittle on Queen-Rearing.....	2 00....	1 75
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by G. R. Pierce, of Iowa, who has had 25 years' experience in bee-keeping, and for the past 5 years has devoted all his time and energies to the pursuit. Price, 50 cents. For sale at this office.

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Our Book—Bees and Honey.

A new (the eighth) edition of the well-known work, "Bees and Honey, or the Management of an Apiary for Pleasure and Profit," thoroughly revised and largely rewritten, is sent to us by Thos. G. Newman, the author, Chicago. It is a duodecimo volume of 250 pages, adorned with a great number of illustrations (including portraits of all the chief students of the bee, living and dead), and neatly bound in cloth. The price is \$1.—*Country Gentleman*.

Prompt and Reliable.

I received the goods in good order five days after they were ordered of Thomas G. Newman & Son. Many thanks for such prompt shipment. They will receive my future patronage.

E. W. EMERSON.

Clear Lake, Wis., May 10, 1892.

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Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

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FOR SALE CHEAP OR EXCHANGE for Bees, 1000 nice Brood-Combs.
Address, EMMA SEALS,
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WANTED—The reader of this to send. One Dollar for my new Smoker—the "Boss." The best, handsomest and most durable Smoker made. W. C. R. KEMP, Orleans, Ind.
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FOR SALE—Thoroughbred Light Brahma and Black Minorcan Fowls. Eggs \$1.25 per 13. Circular free. ALBERT LIND,
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WANTED—Five Hundred Apiarists to try my PURE ITALIAN QUEENS at one dollar each. Now ready. Satisfaction guaranteed.
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FOR SALE—100 closed-end, standing-frame, double-wall Hives, new, nailed up, painted. Set of sections & cases included. \$3.00 each. A great bargain. Order at once. One Novice Honey-Extractor. Send stamp for particulars.
S. A. FISHER, 21 Pemberton Square,
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BEE-KEEPERS, combine Pure-Bred Poultry in connection with Bees—you will have something sure then, in a poor year for honey. I will send 15 Pure B. P. Rock Eggs for \$1.00; 26 for \$1.50. First Premium at Barry County Fair, 1891, on Breeding Pen. Address,
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